

THE ROLE OF KNOWLEDGE WORKERS IN CREATING INNOVATIVE SOLUTIONS IN MODERN COMPANY

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Abstract

In this article, the author selected a topic related to the problems that businesses face. This is the result of permanent changes that occur in the surrounding environment. Taking into account the nature of these turbulences and all the determinants of the modern economy, the author states that in the 21st century the success of companies relies heavily on intangible resources (e.g., knowledge) and the potential of staff. Therefore, the purpose of this article is to define the role of knowledge workers in creating innovative solutions for their companies. For this purpose, the author described: contemporary market determinants and characterized the skills and competence of knowledge workers. In addition, the author presented part of the results of the study conducted in 2016, which covered 100 medium-sized enterprises from the Małopolskie Voivodship. Of course, during the research process, the biggest problem was identifying knowledge workers (special criteria were needed to identify them). However, by analyzing the situation in other countries in Europe, we can say that the positive influence of these people on creating new solutions or improving the quality of already existing products or services is unquestionable. This is why it is important to create this group of people optimal working conditions to make the most of their potential.

Keywords: knowledge worker, globalization, enterprise competitiveness.

1. Introduction

In the 21st century, conditions for the development of modern companies are very complex, turbulent and unpredictable. They create new barriers for effective strategic management. This situation is the result of phenomena that the author described in the third part of the article, globalization, the IT revolution, and knowledge – the basic intangible asset of the future enterprises.

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New challenges appear suddenly, and companies have to cope with them to become or remain in the market. Can we still be successful in the market, based on our existing models and strategies? Are they still effective and in practice? The answers to these questions are for the managers to learn since they are required to change the way they think – it leads to changes in the functioning of their organizations.

All the more so, over the past decades, we can see big changes in the traditional approach to work – such as computerization of workstations and distance work. The skills and competence of employees have also changed – they have to cope with the new expectations of employers who are involved in identifying and acquiring knowledge. The author talks about knowledge workers, whom he described extensively in part four of the article. They not only systematically acquire knowledge and have a high level of education and unique skills but also have what is most important – the ability to identify dysfunctions in the organization and implement new solutions.

Therefore, the purpose of this article is to try to answer the question: what task do knowledge workers have in creating new solutions for their companies? Problems with the identification of this group of people in Polish conditions, the author described in part 2 elaboration. In addition, the author described the situation with potential benefits and problems that are related to them in the surveyed companies.

According to the author, the topic discussed is vital for economical practice because it is very up-to-date. Most scientists believe that this group of workers will have more to say in the near future. This situation will modify the approach to human capital management in today's organizations. Therefore, we can assume that in such turbulent and unpredictable economic conditions, the success or failure of companies will determine the optimal use of the potential of this group of employees.

2. Methodology and description of conducted research

The influence of employees on building a market advantage of enterprises in the 21st century is unquestionable. This is what the author of the study focused on, conducted in 2016 research, in 98 medium-sized companies from the Małopolska province. At the planning stage of the research process, the author intended to use a deliberately random sampling based on enterprise information contained in the GUS data for 2015. Unfortunately, due to the reluctance of many companies to participate, the author adopted the principle of selection based on his declaration to participate (inquiries were sent to 500 companies ask: are they interested in participating in such a project?).

Unfortunately, the research sample did not reflect the characteristic features of the whole group. Therefore, the presented results are not a complete set - they can only be treated as a pilot study.

The first objective of the study was to identify key employees in the surveyed companies to build competitive advantage and their impact on the creation of new sources (the author described this in another publication). The second objective was to identify, in the above group, knowledge workers and identify their potential role in creating new products or services (this was the third stage of research that the author describes in this study).

The author selected the individual interview as a research method. The research technique was a questionnaire survey in which the research tool was a comprehensive questionnaire survey. Respondents in the first stage of the survey were the owners of the surveyed entities - 98 people, who were to answer what role they had in the performance of their employees, compared to traditional production factors.

In the second stage of the research, the author wanted to isolate new sources of competitive advantage, influenced by the key employees identified in the companies studied. Unfortunately, at this stage, the author was having a hard time picking people who have a real impact on creating the competitive advantage of their companies. The owners, the chief executives, and the HR departments pointed out completely different people than the criteria. After long and difficult analyses, the author finally managed to nominate 296 such individuals - it is an average of 3 employees in one company. In practice, this is just average, because in some companies they have not managed to identify such people at all.

Unfortunately, real difficulties appeared only in the next stage of research, in III, because in the company there was no concept of knowledge worker. Luckily, the author had previous experience in this field (he researched 100 of the large Baltic Sea Region companies in the years 2013-2015, which dealt with the same topic, and he had criteria and conditions influencing the employee's affiliation for other countries. To a group of knowledge workers). After modifying all criteria and adapting them to Polish conditions (Table 1), the author identified 296 previously selected individuals, 27 knowledge workers (less than 10% of the total population). They were employed only in 12 companies, so all the descriptions and conclusions in this article will concern only this part of people and companies.

Table 1. Criteria and conditions for belonging to knowledge workers

Criterion / condition	
1.	Professional knowledge
2.	Creativity in everyday work
3.	Courage in implementing innovative solutions
4.	Independence and responsibility in action
5.	Expanding and developing your knowledge
6.	Combine technical skills with managerial skills
7.	High professional culture
8.	Ability to work properly
9.	Dedication to the work done
10.	Ability to work with others
11.	Have confidence in co-workers
12.	Sharing knowledge with others

3. Determinants of modern economy

Contemporary economy, most businesses consider unstable and unpredictable, and the main condition for development is for them to change. This change is not only dynamic but often has indefinite duration. The operation of companies in such times, in which the only constant is that future conditions will be different from the present situation, require a radical change in the development strategies.

In such specific and difficult conditions, we can unambiguously state that an enterprise that fails to change will soon become anachronistic. When competitors are dynamically moving forward on stable positions, it is equivalent to a swift retreat. Ignoring the need for change and the desire to minimize it affects most businesses and is associated with natural humanism. In particular, it is a threat to successful companies. They cannot believe that the factors that have contributed to these achievements in the future will not be enough, and they may even become a ballast. That is why they, as winners and leaders, often fall into complacency and fall short of their successes (Kaleta, 2005, p. 64).

The cause of such a situation is certainly the phenomenon of globalization, i.e., the large-scale integration and long-term integration of national economies, which, through various types of links and cooperation, create a very interrelated economic system on a global scale.

The process of business globalization is a consequence of the changes taking place in the modern economy.

This applies not only to changes forced by technical progress but also to changes in the quality of social and political life that affect the conditions

of international cooperation. Globalization of enterprises causes them to internationalize through the involvement of companies in international production and trade, as well as the ability to provide a full package of services (Adamkiewicz-Drwiłło, 2010, pp. 388-389). This process is helping the IT revolution, which has dominated the world for over 20 years. This is a rapid increase and development of innovations in information technology.

The IT revolution is a positive feedback loop. Products and services (primarily financial and other that have been included in “show civilization”) show significantly higher profitability than others. Moreover, this profitability is also technologically conditioned. Its main reason is the opportunity to reduce transaction time and reimbursement of invested capital radically. In such a situation, research and development spending on new technologies is focused on areas that have the potential to create new products and services (in the most profitable sectors). The intensified tendency to shorten the horizons of economic undertakings does not equal the development of individual economies. In the end, also the global economy. Free capitalists are reluctant to engage in branches where, for objective reasons, vulnerability to computerization and shortening of venture horizons is the smallest (Miszewski, 2015, pp. 32-33).

Another factor that drives change is liberalization in most of the world’s state-owned economies. This phenomenon is particularly evident in countries that undergo systemic transformations. Mostly, it involves the specific release of markets from the control of state power.

At the very end of this calculation, we cannot forget about the modern carrier of competition, which at the end of the last century began to play an increasingly important role - knowledge - not only as a source of information but also an important link in building competitive advantage (we must understand it as a long-term success of the company).

With this statement, many scientists and business practitioners agree. However, it is difficult for us to find in the literature of the subject one definition of this concept, which we will all agree. According to the author of the study, R. M. Grant (2002, p. 227), who believes that gaining competitive advantage is said to have one or more (or potential to obtain) a long-term higher return than the competition from two or more competitors competing in the same market. So far, we can say that competitive advantage is due to the ability of an enterprise to make a higher profit than its rivals. The companies that make it, they create higher values for the customer - they can handle it better than the competition (Porter, 1986, p. 20).

In the realm of such intense competition, the success of businesses can be determined by the ability to become unique in the marketplace. Companies that have a stable and stable market position offer proven products or services,

can no longer be certain about their future. At any moment, they may lose with the permanently emerging competitors, who in some respects will be more unique, that is, they will be interested in something potential customer.

It is very valuable to have a uniqueness that fits the future needs of customers in a typical way. According to the author, even in generating these needs. If a company gains an advantage in meeting needs that have not yet been disclosed to anyone, it will automatically have a valuable time advantage, and it can take advantage of it in the long run. However, the most important kind is the uniqueness that will not give you a big advantage over your competitors, and it will help to defend this advantage and keep it for a long time. This is the result of the process in which the most important and difficult to replicate advantage is the most important in the strategic dimension (Kaleta, 2005, pp. 68-69). But we must remember that such a feature cannot be acquired in the short term. In the 21st century, it already has a strategic dimension - we have to plan, it and we have to be consistent in action.

In sum, all the changes associated with the processes of globalization, the progressive automation of production, the growing competition and the rapid development of information technology are just some of the determinants of the development of modern businesses. They force companies to make drastic changes in virtually every area of their business. However, not every organization can change this effectively to plan and implement. That is why business strategies are often driven by more competent employees, and they place more emphasis on improving their skills and qualifications. Current economic development has led to a change in the valuation of the organization's resources, and he has given the highest place in this hierarchy to human capital.

4. History and meaning of knowledge workers

Changes in companies are taking place quickly and in all types of industries - from service to manufacturing companies. However, their implementation brings a lot of problems to companies and often causes chaos, which is heavily related to human resources - companies must employ people with the right qualifications and desirable competence.

The most important challenges faced by companies and affecting changes in work resources are (Winslow & Bramer, 1994):

- creating products and services of the highest quality;
- perfect customer service;
- reactions to the environment;
- the ability to carry out differentiated activities;
- transition from control to self-control;

- implementation of changes;
- constant maintenance of productivity; and
- ability to select information flow.

Such conditions are conducive to the development of a new category of employees, such as knowledge workers (this concept may not be new since it emerged in the 1960s but is becoming more popular over time). Their main attribute is the knowledge that comes not only from formal education but above all from continuous self-development - improvement and further training as well as experience gained while working in informal groups. In addition, these employees are characterized by superior creativity, independence in their actions and, perhaps, the most important, courage in creating and implementing innovative solutions to business practice.

As the first notion of knowledge worker to the canon of management in 1969, Ducker introduced only in relation to the kayakers. For another 50 years, this term was evaluated, changes were made to it because it found a wider reverberation in economic practice.

According to Sikorski (2004, p. 346), changes in the role and characteristics of workers were noticed in the United States just before the end of the last decade of the twentieth century. The analysis of generational differences related to attitudes towards work showed that younger workers:

- they are mentally fit for frequent changes in the work it is supposed to give them a quick promotion;
- they are not afraid of change - they are flexible, confident, and willing to take risks;
- they do not want a long career in one company - they do not want to be loyal like their fathers;
- they are result oriented - they have a strong need for achievement, supported by the desire to learn continuously;
- they want to influence the environment; and
- they do not want to be controlled.

In recent years in the literature of the subject and economic practice, there have been many definitions of the concept of knowledge worker. They are often different in terms of presented features. The author will present some of them arranged in chronological order (in this way we can see the evaluation of this complex concept):

- 1) Horibe (1994, p. 23) believed that knowledge worker is a person who uses the mind to create new values.
- 2) On the other hand, Allee (1997) claims, that knowledge worker uses and organizes symbols and ideas while working with information and knowledge. They bring ideas and knowledge to the company to move on to other projects later. It is important that the knowledge worker can influence the shape of the organization and force the introduction

- of the corresponding forms of work since he has a great deal of importance and strength to take care of his business.
- 3) By following Drucker (1999, p. 14, 82), we can see that in the future there will be more visible division of the professionally active into two groups: knowledge workers (specialists) and service workers. The leading groups in the knowledge society will be skilled workers - educated practitioners who can use knowledge for production purposes.
 - 4) On the other hand, Davenport (2007, p. 17, 22) thought that knowledge workers are making a living of thinking. Their work tool is the mind, and every effort associated with performing a profession is intellectual, not physical. They differ from other employees in that they not only process data through thought processes but they also analyze, understand, and qualitatively create new knowledge.
 - 5) Morawski (2009, p. 45) claims that knowledge worker is perceived in the context of formal, often above average education. He combines knowledge in a variety of fields, and he has in-depth expertise along with specific practice-based, specific skills often unavailable to others.

They conclude that if we want to characterize a knowledge worker, we must primarily focus on its core competence: having unique experience and skills, using symbols and symbols in our work, professionalism, mobility, entrepreneurship, adaptability, and creativity.

On the other hand, it is also worth pointing out, following Huang (2011, pp. 933-934), on the motivational features of knowledge workers, for example, autonomy, opportunity for development, satisfaction with tasks, and new challenges. This means that the management of a given content must create the expected conditions for it to optimize its performance. The most common obstacles in this direction are: functional organizational structure, implemented strategy, dysfunctions in the process of internal communication, lack of partnership relations between the participants of the organization (especially on the line: manager - employee), or lack of trust (Mladkova, 2011, p. 257).

In sum, the most controversial issue is the controversy over the identification of individual knowledge workers in the organization, who can be included in this group, and who is not. It seems, however, that the main determinant of this choice should be the role that a person performs in the organization at a certain time.

This is all the more important in today's market environment, as knowledge workers are now expected to perform many specific roles. In the opinion of the author of the study it is important that for knowledge workers, the knowledge itself is not only raw material/contribution to work but also its result. For

these people, there is no important division into planning and execution - it is completely obliterated. We can call it a phenomenon on a global scale, which is very characteristic of the changes accompanying the development of the modern economy.

5. Analysis of research results

Based on the observations and research conducted by the author of the study, in his view, the use of the knowledge workers' potential in a given economic entity is entirely conditioned by the specifics and determinants of the development of all its components. Therefore, investments in this kind of people have to deal with significant problems and barriers, which are even more cumulative by the difficult economic and social situation in Poland (Figure 1).

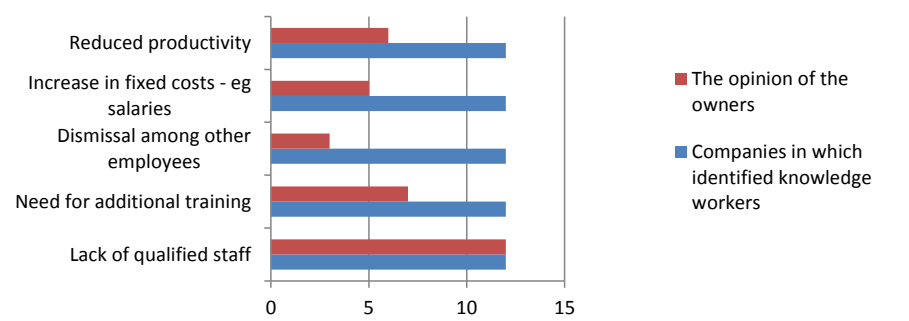


Figure 1. Identified barriers to exploiting the potential of knowledge workers

In addition to the above identified financial barriers that arise with the knowledge workers in the company, the author also succeeded in isolating the social problems associated with this group of workers during the research process (Figure 2).

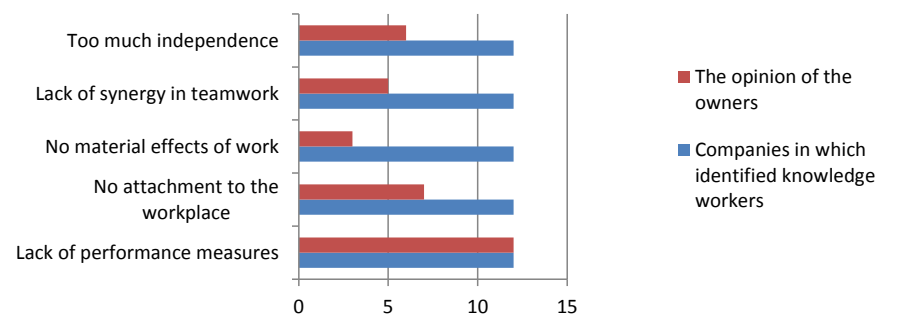


Figure 2. Social problems accompanying the work of knowledge workers

But that was not the worst. The most surprising results of research for their author is the opinion of the owners of companies about knowledge workers. On the one hand, knowledge workers are the main element of creating the competitive advantage for the bosses (they are more important than technology, processes, etc.) - 11 of 12 business owners have recognized. Unfortunately, on the other hand, they are the cause of many conflicts with other employees (10 out of 12 companies). In addition, they are the barrier to optimal knowledge management (9 of 12 companies) - they do not share knowledge, they misuse knowledge, and they are not always able to update it.

Another surprise for the author was the usefulness of knowledge workers for the company. By planning the entire research process, the author was convinced that this group of employees plays a very important role in creating and implementing new services and products (this was the case in other countries - RMB research - where knowledge workers were the creators of innovative solutions). Unfortunately, in Polish conditions, they are primarily responsible for the work of planning and organizing the work of others employed. It would not be surprising if it were not for the fact that none of the 23 identified individuals were employed in a managerial position. It is also important that the above conclusion is an objective assessment of two groups: knowledge workers and owners of their companies (see Figure 3 for a detailed scope of responses).

In summarizing all the materials taken, data and conclusions from the research, in Polish conditions, the problems of using the potential of knowledge workers are the result of poor management and lack of appropriate organizational culture to support knowledge management processes. According to the author, there are also shortages of motivation systems dedicated to this group of employees, in terms of their expectations and approach to their work. It is therefore important to start creating individual knowledge management models for companies that are designed to make it easier for those people to carry out their tasks and allow their employers to keep them in the company.

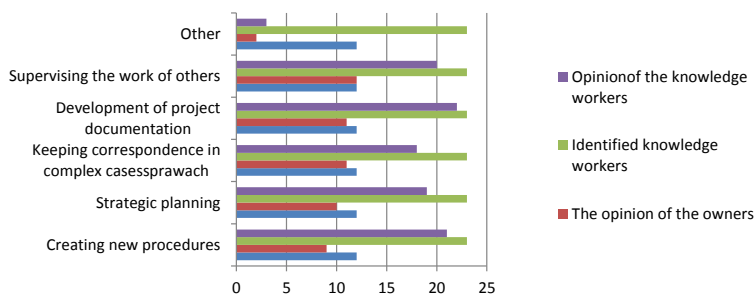


Figure 3. Identified areas in the surveyed companies most affected by knowledge

5. Conclusions

In the context of globalization, progressive competition and technological change, today's companies are no longer able to build competitive advantage on the basis of any other resource than knowledge workers. They are in their organizations primarily responsible for:

- creating new forms of action;
- organizing work for others;
- strategic analysis of the company;
- strategic planning;
- building relationships with external stakeholders; and
- writing complicated documentation.

Knowledge workers help those companies who are aware that knowledge is the most important asset but have a problem with its optimal use.

Unfortunately, as research shows, most Polish companies do not use this capital to build competitive advantage on a daily basis - they point to a lot of problems and barrier, which concern:

- high expenses and uncertainty of return;
- lack of specific measures of their work - effects are mostly non-material;
- lack of motivation systems; and
- specific characteristics of this group, such as high independence and self-reliance, lack of attachment to the work place, high expectations or a reluctance to perform commands and routine activities.

What can we do in the future to change this? According to the author, the most important step is to recognize this group of employees, and we must treat them as a chance to pursue business goals based on the available knowledge successfully. We also have to let them do what they like and can do:

- create products and services that are distinct from the competition;
- look for market niches and niche in customer needs;
- create and implement new customer contact channels;
- encourage customers to take advantage of the available offer.

This is a big challenge for HR departments that have to face this new group of employees. It is difficult to control a group of talented and talented people who value the full autonomy and value of work in themselves, whose contribution to a company's success will most likely be critical to its operation.

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